

### *ABSTRACT OF THE DISCLOSURE*

A reception result of an analog signal transmitted from a local switch to a subscriber line, or a voltage difference corresponding to a line current is analyzed, and a transmission characteristic in the subscriber line is evaluated based on an analyzing result. The transmission characteristic is sent to a network by use of a function of an analog transmitting unit. Noises having power of a predetermined threshold value or more are detected from a data signal input to a digital transmitting unit, and a periodicity of the noises is examined, whereby influences of the cyclic noises are evaluated, and an examination result is sent to the network by use of the function of the analog transmitting unit. As a result, provided is an xDSL modem capable of automatically collecting various characteristics of the subscriber line connected thereto prior to a start of a provision of a broadband communication service.